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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,390	10/25/2000	Michael D. Stokes	205718	4121

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EXAMINER	
CASCHERA, ANTONIO A	

ART UNIT	PAPER NUMBER
2676	9

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/696,390	Applicant(s) STOKES ET AL.	
	Examiner Antonio A Caschera	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-12,14,16-24,26-29 and 31-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-12,14,16-24,26-29 and 31-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the color acquisition control parameters" in line 13 of claim 1. There is insufficient antecedent basis for this limitation in the claim. Does the applicant mean to say, "the image acquisition control parameters," as similar claims 14, 24 and 29 do? The office will interpret the claim as such in regards to the prior art rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 11, 14, 23, 24, 28, 29 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Lavendel et al. (U.S. Pub 2002/0126147 A1).

In reference to claim 1, Lavendel et al. discloses a computer system including computer-readable medium, comprising computer executable process steps for acquiring color images using an image capturing device, controlled by an application (see paragraphs 46-47, lines 1-2 of paragraph 48 and #40 of Figure 4). Lavendel et al. discloses a color "Tone" interface to tone core control of an image whereby the tone control is device independent and is used for manipulating tonal properties of an image (see paragraph 115). Lavendel et al. also discloses the "Tone" control to be comprised within a core TWAIN control user interface (see paragraph 71 and Figures 11a-e). Note, the office interprets the color management component of applicant's claim functionally equivalent to the "Tone" control comprised with the TWAIN core control. Lavendel et al. discloses an image operations manager configured to control image input, manipulation, and resource allocation whereby a device driver communicates with the image operations manager in order to determine image acquisition parameters, used in controlling the features of the image acquisition device (see paragraphs 61-63). Note, the office interprets the image acquisition parameters of Lavendel et al. to inherently teach indicating whether color management is required as the image acquisition manager is responsible for sending image data to the optional image processing modules (i.e. color adjustment), if necessary (see lines 2-9 of paragraph 62). Lavendel et al. further discloses a dynamically loadable device driver for the image acquisition device whereby the device driver is used to control the image acquisition

device based on user manipulation of the interfaces (see paragraphs 67 and 70). Note, the office interprets Lavendel et al. to inherently teach the device driver invoking a color management function when a color management parameter is set to indicated color management as Lavendel et al. discloses the device driver to control acquisition, including color management, based on user manipulation of the user interfaces which include options for color management (see Figures 11a-e). Lavendel et al. discloses a TWAIN application programming interface (API) for calling by the driver, via the TWAIN access module, to invoke TWAIN core control, including the "Tone" and other controls of the TWAIN core (see paragraphs 63, 67 and #42, 44, 51 of Figure 4). Lavendel et al. also discloses a TWAIN source manager operating between the image processing application and a device driver (see #40, 41 and 51 of Figure 4) and providing device driver information and TWAIN user interface data to the application along with TWAIN acquired data via the TWAIN access module (see paragraphs 55-56).

In reference to claims 11, 23, 28 and 33, Lavendel et al. discloses all of the claim limitations as applied to claims 1, 14, 24 and 29 respectively. Note, the office interprets Lavendel et al. to inherently teach the device driver invoking a color management function when a color management parameter is set to indicated color management as Lavendel et al. discloses the device driver to control acquisition, including color management, based on user manipulation of the user interfaces which include options for color management (see Figures 11a-e). Even further, since Lavendel et al. discloses user interfaces allowing for a user to manipulate color processing of image data (see Figures 11a-e), the office interprets Lavendel et al. to disclose the feature of indicating whether or not to perform color management in the form of computer executable instructions.

In reference to claim 14, claim 14 is equivalent in scope to claim 1 above and is therefore rejected under similar rationale. Further, the office believes Lavendel et al. inherently discloses checking image acquisition control parameters in an image acquisition control data structure as the GUI's of Lavendel et al. provide selection and manipulation of acquisition parameters wherein modification of these parameters alters image acquisition properties (see Figures 11a-e of Lavendel et al.). Also, in order to properly alter image acquisition properties, the user manipulated parameters must be at least temporarily saved and then passed onto the capturing device as the GUI's of Lavendel et al. inherently provide.

In reference to claim 24, claim 24 is equivalent in scope to claim 1 above and is therefore rejected under similar rationale. Again, Lavendel et al. discloses a computer system including computer-readable medium, comprising computer executable process steps for acquiring color images using an image capturing device, controlled by an application (see paragraphs 46-47, lines 1-2 of paragraph 48 and #40 of Figure 4). Further, Lavendel et al. discloses a scanner as being included as an image acquisition device within the computer system (see paragraph 48 of Lavendel et al.).

In reference to claim 29, claim 29 is equivalent in scope to claim 14 above and is therefore rejected under similar rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-8, 10, 16-22, 26, 27, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Lavendel et al. (U.S. Pub 2002/0126147 A1) in view of Shiraiwa (U.S. Patent 6,611,621).

In reference to claims 3, 16, 26 and 31, Lavendel et al. discloses all of the claim limitations as applied to claims 1, 14, 24 and 29 respectively above however, Lavendel et al. does not explicitly disclose the color management function performing color space conversion however Shiraiwa does. Shiraiwa discloses an image processing method and apparatus for performing color correction in an image observation environment (see column 1, lines 8-11). Shiraiwa discloses obtaining color image signals from an image input device, such as a scanner or digital camera, and performing color space conversion from an image input device color space to eventual device dependent signals (see columns 3-4, lines 66-4, 21-25 and column 5, lines 54-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the image acquisition and processing techniques of Lavendel et al. with the color space conversion methods of Shiraiwa in order to eliminate differences in colors used by each device, using a common color space (see column 1, lines 17-32 of Shiraiwa).

In reference to claims 4 and 17, Lavendel et al. and Shiraiwa disclose all of the claim limitations as applied to claims 3 and 16 respectively above in addition, Shiraiwa discloses the conversion to output device color space comprising the step of correcting for gamma (see column 4, lines 5-12). Note, since Shiraiwa discloses color conversion in order to eliminate differences in colors used by multiple devices, as perceived by a user (see column 1, lines 17-32)

the office interprets that Shiraiwa inherently discloses linear gamma correction with respect to uniform human perception.

In reference to claims 5-7 and 18-20, Lavendel et al. and Shiraiwa disclose all of the claim limitations as applied to claims 4 and 17 respectively above. Neither, Lavendel et al. nor Shiraiwa explicitly disclose the destination color space being sRGB or scRGB however, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the conversion steps of Shiraiwa to provide support for sRGB and scRGB output devices. Applicant has not disclosed that the destination space being in the sRGB or scRGB color spaces provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the conversion to CMY device dependent color space because the feature of the destination space being specifically the sRGB or scRGB space is a matter of design choice as preferred by the designer and to which best suits the application at hand. Therefore, it would have been obvious to one of ordinary skill in this art to modify Shiraiwa to obtain the invention as specified in claim 5. Further, the specification states, "The source and destination color spaces are, of course, not limited to the sRGB and/or device spaces," (see page 13, lines 5-7) and therefore the office believes such a feature provides no immediate criticality to the application at hand. In reference to claim 6, the specification states, "This color space [scRGB] has a substantially linear gamma with respect to luminance," (see page 12, lines 20-21). The same rationale in view of design choice can be applied to claim 6 as this feature, linear gamma with respect to luminance, is comprised within the scRGB space.

In reference to claims 8 and 21, Lavendel et al. and Shiraiwa disclose all of the claim limitations as applied to claims 3 and 16 respectively above in addition, Shiraiwa discloses the color space conversion utilizing device profile data (see column 2, lines 33-40).

In reference to claims 10, 22, 27 and 32, Lavendel et al. and Shiraiwa disclose all of the claim limitations as applied to claims 8, 20, 26 and 31 respectively above. Shiraiwa discloses the color space conversion based on numerous color profiles including an input apparatus profile whereby the color profile of the input apparatus is specifically used in converting to output color space (see column 16, lines 49-63 and column 17, lines 22-30). Note, the office believes Shiraiwa inherently discloses the profile identified as an operation parameter as the profile is specifically utilized in color converting operations.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lavendel et al. (U.S. Pub 2002/0126147 A1), Shiraiwa (U.S. Patent 6,611,621) and further in view of Lipton (U.S. Patent 5,835,098).

In reference to claim 9, Lavendel et al. and Shiraiwa disclose all of the claim limitations as applied to claim 8 above. Neither Lavendel et al. nor Shiraiwa explicitly disclose embedding a profile of destination color space in color image data. Lipton discloses embedding a color profile defining a certain device into a document (see column 2, lines 6-10). The office interprets the document of Lipton to inherently comprise of image data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the image acquisition and processing techniques of Lavendel et al. and the color conversion techniques of Shiraiwa with the embedding of destination device color profiles in image data in

order to ensure the correct visualization of image data even as device components degrade over time (see column 3, lines 14-23 of Lipton).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lavendel et al. (U.S. Pub 2002/0126147 A1) in view of Lipton (U.S. Patent 5,835,098).

In reference to claim 12, Lavendel et al. discloses all of the claim limitations as applied to claim 11 above. Lavendel et al. does not explicitly disclose the color image data of the captured image having a color profile embedded. Lipton discloses opening a document and loading any color profiles found within the document (see #50 and 52 of Figure 5). The office interprets the document of Lipton to inherently comprise of image data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the image acquisition and processing techniques of Lavendel et al. with the embedding of destination device color profiles in image data in order to ensure the correct visualization of image data even as device components degrade over time (see column 3, lines 14-23 of Lipton) by appending input color device properties to color data.

Response to Arguments

7. The cancellation of claims 2, 13, 15, 25 and 30 is noted.

8. Applicant's arguments with respect to claims 1, 3-12, 14, 16-24, 26-29 and 31-33 have been considered but are moot in view of the new ground(s) of rejection.

References Cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a. Levine et al. (U.S. Pub 2003/0177448 A1)

- Levine et al. discloses a system and method for acquiring images from imaging devices, the system supporting the TWAIN communication specification.

b. Heiden (U.S. Patent 6,489,973 B1)

- Heiden discloses an image acquisition architecture including a device class, storage class, package class, and an item class.

c. Camara et al. (U.S. Patent 6,373,507 B1)

- Camara et al. discloses an image acquisition system including a set of API's exposing image management functionality to applications.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703)-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

aac

4/26/04

Matthew C. Bella

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